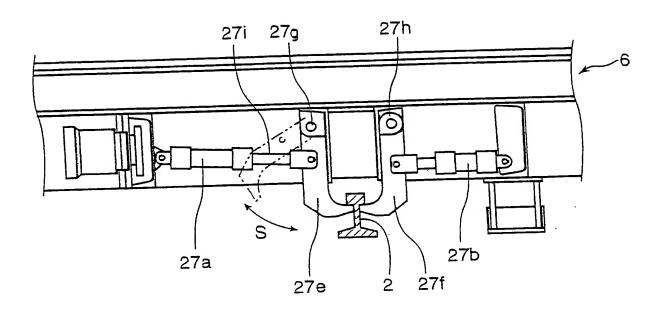
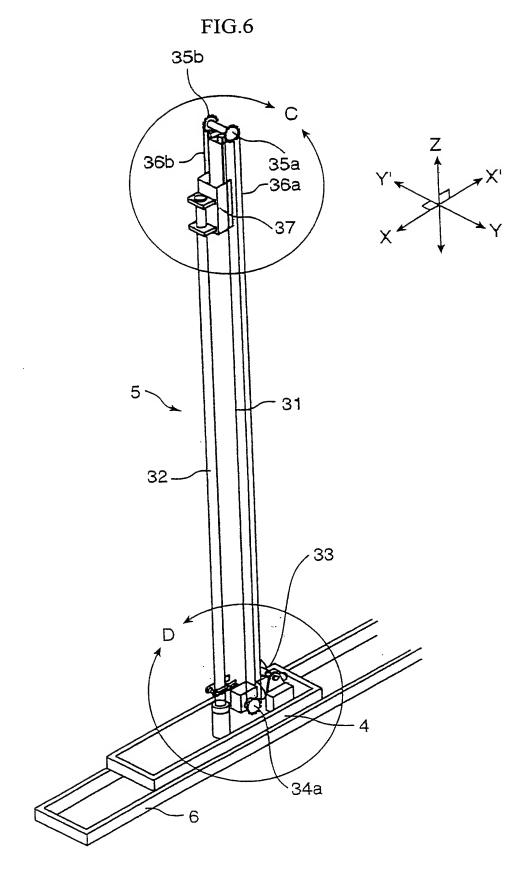
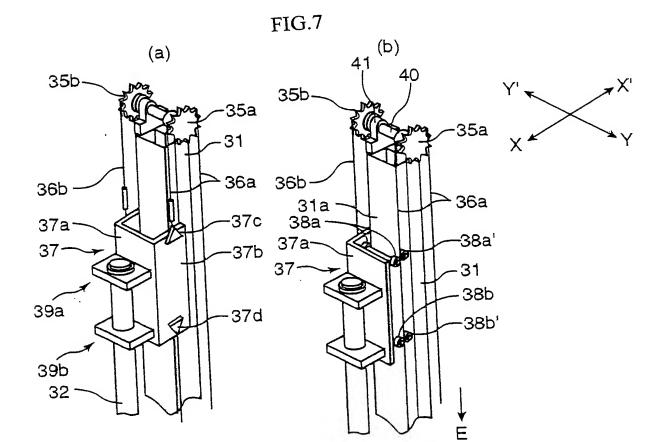


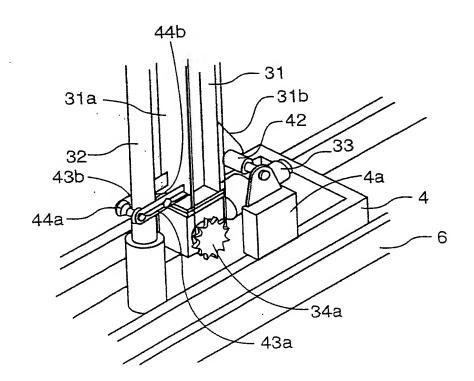
FIG.5

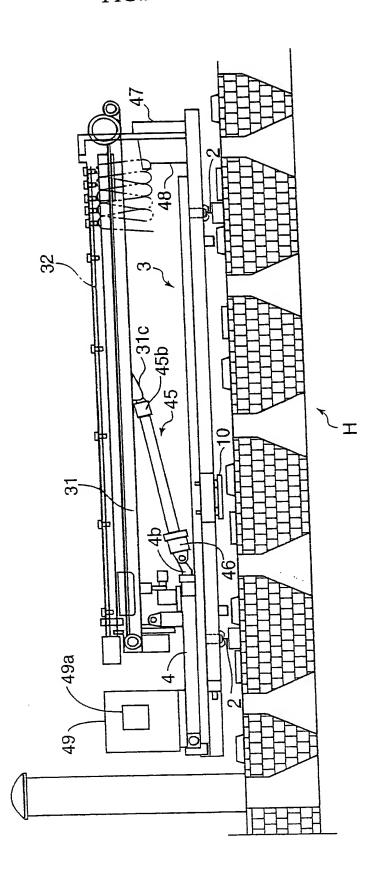


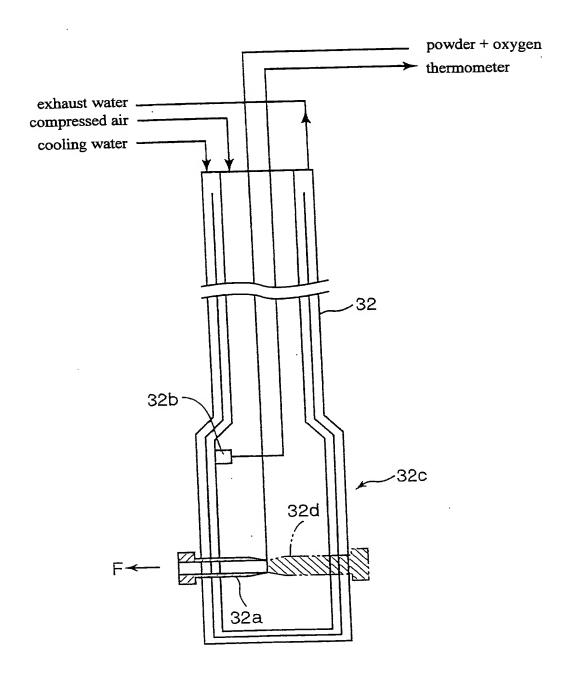


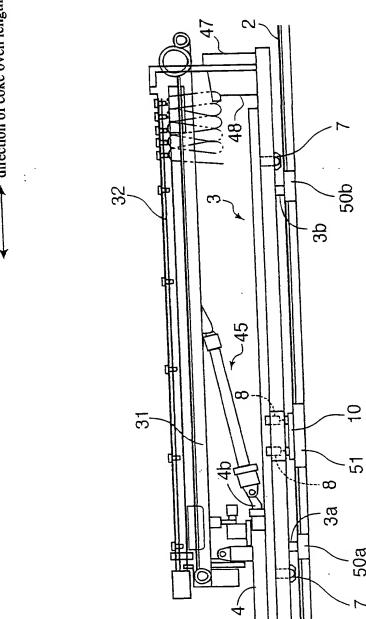




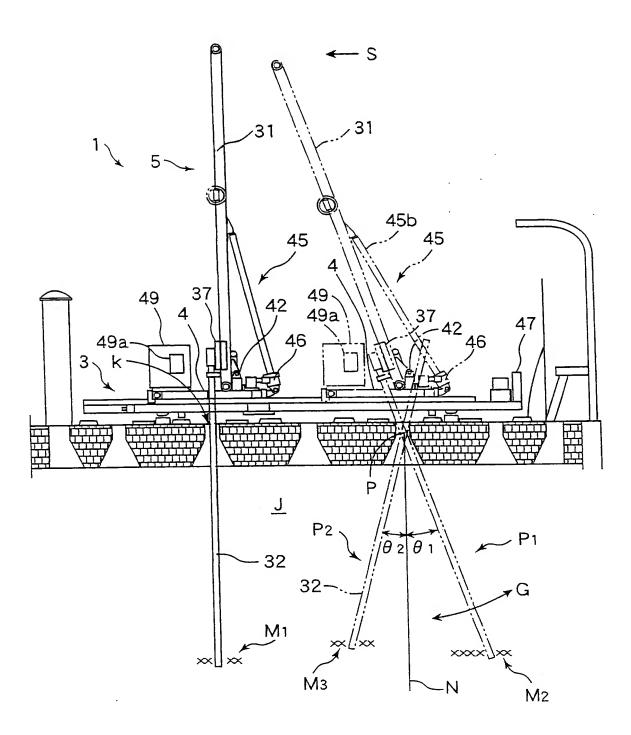


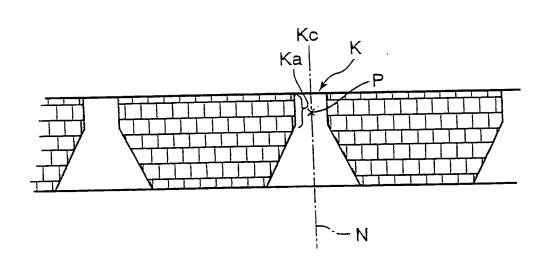


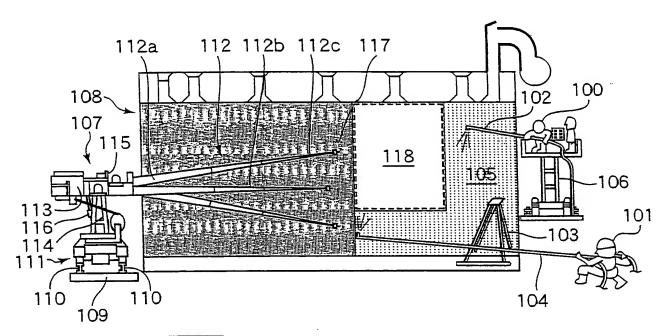




direction of coke oven length







repairable range by conventional repairing device

repairable range by operators

